

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:
CTS of Asheville, Inc. Superfund Site
Asheville, Buncombe County,
North Carolina

CTS Corporation

Respondent.

ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON
CONSENT FOR REMEDIAL
INVESTIGATION/FEASIBILITY STUDY

U.S. EPA Region 4
CERCLA Docket No. CERCLA-04-2012-3762

Proceeding Under Sections 104, 107 and
122 of the Comprehensive Environmental
Response, Compensation, and Liability Act,
as amended, 42 U.S.C. §§ 9604, 9607 and
9622.



TABLE OF CONTENTS

	Page
I. JURISDICTION AND GENERAL PROVISIONS	1
II. PARTIES BOUND.....	2
III. STATEMENT OF PURPOSE.....	2
IV. DEFINITIONS	2
V. FINDINGS OF FACT	5
VI. CONCLUSIONS OF LAW AND DETERMINATIONS.....	6
VII. SETTLEMENT AGREEMENT AND ORDER	7
VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATOR.....	7
IX. WORK TO BE PERFORMED	9
X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS	12
XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION	13
XII. SITE ACCESS AND INSTITUTIONAL CONTROLS	15
XIII. COMPLIANCE WITH OTHER LAWS.....	16
XIV. RETENTION OF RECORDS	16
XV. DISPUTE RESOLUTION	17
XVI. STIPULATED PENALTIES	17
XVII. FORCE MAJEURE.....	20
XVIII. PAYMENT OF FUTURE RESPONSE COSTS	21
XIX. COVENANT NOT TO SUE BY EPA.....	22
XX. RESERVATIONS OF RIGHTS BY EPA	23
XXI. COVENANT NOT TO SUE BY RESPONDENT	24
XXII. OTHER CLAIMS.....	25
XXIII. EFFECT OF SETTLEMENT/CONTRIBUTION.....	25
XXIV. INDEMNIFICATION	26
XXV. CONTRIBUTION PROTECTION	27
XXVI. INSURANCE	27
XXVII. FINANCIAL ASSURANCE.....	27
XXVIII. INTEGRATION/APPENDICES.....	29
XXIX. ADMINISTRATIVE RECORD.....	29
XXX. NOTICE OF COMPLETION OF WORK.....	29
XXXI. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION	30

**ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT
FOR CTS OF ASHEVILLE, INC. SUPERFUND SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent (Settlement Agreement) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and CTS Corporation (CTS). The Settlement Agreement concerns the preparation and performance of a remedial investigation and feasibility study (RI/FS) for the Site, located generally in the area of the former CTS of Asheville, Inc. facility on Mills Gap Road in Asheville, North Carolina, as well as the areal extent of ground water contamination. This Settlement Agreement also addresses the payment of Future Response Costs incurred by EPA in connection with the RI/FS.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9607, and 9622 (CERCLA). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C and 14-14-D. This authority was further redelegated by the Regional Delegation 14-14-C, through the Director, Superfund Division, to the Chiefs of the Superfund Remedial and Site Evaluation Branch and the Superfund Remedial Branch.

3. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA will notify the relevant Federal and State natural resource trustee(s), including the National Oceanic and Atmospheric Administration (NOAA), the Department of Interior (DOI), and the North Carolina Department of Environment and Natural Resources (NCDENR) of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal and State trusteeship.

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings, other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact in Section V and the conclusions of law and determinations in Section VI. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its successors and assigns. Any change in ownership or corporate status of a Respondent including, but not limited to, any transfer of assets or real or personal property, shall not alter such Respondent's responsibilities under this Settlement Agreement.

6. Respondent is jointly and severally liable for carrying out all activities required by this Settlement Agreement.

7. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

8. The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind Respondent to this Settlement Agreement.

III. STATEMENT OF PURPOSE

9. In entering into this Settlement Agreement, the objectives of EPA and Respondent for the Site are: (a) to determine the nature and extent of actual or potential contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants into ground water that serves as a drinking water source for homes in the area, and into soil, surface water, sediment, air and that contamination's vapor intrusion pathway that may reasonably be expected to become impacted by Site related contaminants by conducting a Remedial Investigation as more specifically set forth in the Statement of Work (SOW) attached as Appendix A to this Settlement Agreement; (b) to identify and evaluate remedial alternatives to prevent, mitigate, or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants identified in Paragraph 9.(a) by conducting a Feasibility Study as more specifically set forth in the SOW in Appendix A to this Settlement Agreement; and (c) to recover Future Response Costs (as hereinafter defined) incurred by EPA with respect to this Settlement Agreement.

10. The Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess Site conditions and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 (NCP). Respondent shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidance, policies, and procedures.

IV. DEFINITIONS

11. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601-9675.

b. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

c. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXXI.

d. "EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

e. "NCDENR" shall mean the North Carolina Department of Environment and Natural Resources and any successor departments or agencies of the State.

f. "Engineering Controls" shall mean constructed containment barriers or systems that control one or more of the following: downward migration, infiltration, or seepage of surface runoff or rain; or natural leaching migration of contaminants through the subsurface over time. Examples include caps, engineered bottom barriers, immobilization processes, and vertical barriers.

g. "Future Response Costs" shall mean all costs, including, but not limited to, oversight, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports, and other deliverables pursuant to this Settlement Agreement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry (ATSDR) costs, the costs incurred pursuant to Paragraph 49 (including, but not limited to, costs and attorneys fees and any monies paid to secure access, including, but not limited to, the amount of just compensation), and Paragraph 86 (Work Takeover).

h. "Institutional Controls" shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

i. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

j. "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

k. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral or an upper or lower case letter. References to paragraphs in the SOW will be so identified, e.g., "SOW Paragraph 15."

l. "Parties" shall mean EPA and Respondent.

m. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6992.

n. "Respondent" shall mean CTS Corporation.

o. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

p. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXVIII) and all documents incorporated by reference into this document including without limitation, EPA-approved submissions. EPA approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by EPA. In the event of conflict between this Settlement Agreement and any appendix or other incorporated documents, this Settlement Agreement shall control.

q. "Site" shall mean the CTS of Asheville, Inc. Superfund Site, encompassing approximately nine (9) acres, located in Asheville, on Mills Gap Road near Skyland, Buncombe County, North Carolina, and the areal extent of the contamination.

r. "Special Account" shall mean the special account, within the EPA Hazardous Substances Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), under the Administrative Order on Consent for Removal Action.

s. "State" shall mean the State of North Carolina

t. "Statement of Work" or "SOW" shall mean the Statement of Work for development of an RI/FS for the Site, as set forth in Appendix A to this Settlement Agreement. The Statement of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement as are any modifications made thereto in accordance with this Settlement Agreement.

u. "United States" shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

v. "Waste Material" shall mean (a) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (c) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

w. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

V. FINDINGS OF FACT

12. International Resistance Corporation (IRC), which later became Northrop Grumman Space and Missions Systems, owned and operated an electroplating facility at the Site from 1952-1959. CTS of Asheville, Inc., now known as CTS Corporation (CTS), bought the property and manufactured electronic components at the facility until 1987. Trichloroethene (TCE) was used during electroplating at the facility. In December 1987, Mills Gap Road Associates (MGRA) bought the property from CTS. MGRA sold 44.89 acres to the Biltmore Group, Inc. who developed the tract into residential property. MGRA retained ownership of the 8.65 acre tract where manufacturing took place and is the current owner of the Site.

13. Ground water and soil sampling investigations at the Site revealed the presence of TCE, with the highest concentrations located beneath the former manufacturing building. EPA and NCDENR investigations found contamination primarily in ground water and in the soil at the Site. Ground water at the Site is primarily contaminated with chlorinated solvents, such as TCE, cis-1,2-dichloroethene (cis-DCE), and 1,1,1-trichloroethane (TCA), part of a chemical family commonly referred to as volatile organic compounds (VOCs). Degradation products, chemicals that occur as TCE breaks down, were also measured at elevated levels. Those chemicals are cis-DCE, 1,1-dichloroethene (1,1-DCE) and vinyl chloride. In addition to these chemicals, heavy metals, polychlorinated biphenyls (PCBs), bis(2-ethylhexyl)phthalate and petroleum constituents such as benzene, naphthalene and 2-methylnaphthalene have also been found at the Site. All of the chemicals found are hazardous substances.

14. The chemical compound trichloroethylene (a.k.a. trichloroethene or TCE) was used by IRC and CTS at the Site to clean and/or degrease metal objects prior to electroplating.

15. In July 1999, NCDENR was contacted regarding oily leachate in a ditch located at 273 Mills Gap Road, Asheville, North Carolina, near the Site.

16. Subsequent investigation by NCDENR resulted in identification of two springs located on properties neighboring the 273 Mills Gap Road property that were contaminated with chlorinated solvents, including trichloroethylene, and petroleum constituents.

17. One of these springs served as the primary potable water supply for residents of 275 Mills Gap Road, Asheville, North Carolina and 277 Mills Gap Road, Asheville, North Carolina.

18. Additional investigation by NCDENR resulted in the identification of one water well located at 10 Concord Road, Asheville, North Carolina, that was contaminated with trichloroethylene and which served as the potable water source for two households.

19. In 2007-2008, four private wells in the Oaks Subdivision, located approximately 3/4 of a mile northeast of the CTS facility, were found to be contaminated with TCE. As a temporary measure, EPA provided bottled water to affected residents until the Oaks Subdivision was subsequently connected to the municipal water supply.

20. EPA sampled 72 private wells in September 2008 and is currently monitoring approximately 100 wells on a quarterly basis that are located within a one-mile radius of the Site. To date, EPA has completed twelve quarterly drinking water well sampling events.

21. In August 2009, EPA sampled a residential well on Chapel Hill Church Road that was not part of the quarterly monitoring network and found the well to be highly contaminated with TCE and cis-dichloroethylene (cis-DCE). This well provided water to two households. EPA responded by supplying the residents with bottled water and subsequently connected the residents to the municipal water system. EPA conducted packer testing, as well as other investigations, to determine the extent of ground water contamination in other wells in the Oaks Subdivision and Chapel Hill Church Road from the Site.

22. The Site was proposed for inclusion on the National Priorities List (NPL) pursuant to CERCLA Section 105, 42 U.S.C. § 9605, on March 10, 2011, 76 Fed. Reg. 13113-13120 (March 10, 2011). The Site has a Hazardous Ranking System (HRS) Score of 48.64 based on the ground water migration pathway.

23. Respondent and EPA entered into an Administrative Order on Consent for a Removal Action (2004 AOC) on January 16, 2004. Respondent continues to perform work under the 2004 AOC. EPA's removal program continues to address the time-critical aspects of the Site such as evaluation of the effectiveness of the removal activities undertaken thus far, including the installation and operation of a Soil Vapor Extraction (SVE) system.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth in Section V, EPA has determined that:

24. The CTS of Asheville, Inc. Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

25. The contamination found at the Site, as identified in the Findings of Fact above, include "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), including, but not limited to, TCE.

26. The conditions described in the Findings of Fact in Section V above constitute an actual and/or threatened "release" of a hazardous substance from the facility as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

27. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

28. Respondent is a responsible party under Sections 104, 107, and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622.

a. Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response actions and for response costs incurred and to be incurred for the Site.

b. Mills Gap Road Associates is the "current owner" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

c. Mills Gap Road Associates is a responsible party under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§9604, 9607 and 9622 and is jointly and severally liable for performance of the response actions and for response costs incurred and to be incurred for the Site.

d. Northrop Grumman Space & Mission System Corp. is an "owner or operator" as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), since its predecessor, IRC, owned and operated the electroplating facility and the Site from 1952 through 1959.

e. Respondent CTS Corporation is an "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

29. The actions required by this Settlement Agreement are necessary to protect the public health, welfare, or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

30. EPA has determined that Respondent is qualified to conduct the RI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondent complies with the terms of this Settlement Agreement.

VII. SETTLEMENT AGREEMENT AND ORDER

31. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATOR

32. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Within fourteen (14) days of the Effective Date, and before the Work outlined below begins, Respondent shall notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories to be used in carrying out such Work. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001; Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondent shall

be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. This Settlement Agreement is contingent on Respondent's demonstration to EPA's satisfaction that Respondent is qualified to perform properly and promptly the actions set forth in this Settlement Agreement. If EPA disapproves in writing of any person's technical qualifications, Respondent shall notify EPA of the identity and qualifications of the replacements within five (5) days of the written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondent. During the course of the RI/FS, Respondent shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

33. Within fourteen (14) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA's technical and legal contacts, in writing, the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present or readily available during the Site Work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within five (5) days following EPA's disapproval. Respondent shall have the right to change its Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA ten (10) days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

34. EPA has designated Samantha Urquhart-Foster of the Superfund Remedial and Site Evaluation Branch, Region 4 as its Project Coordinator, or Remedial Project Manager (RPM). EPA will notify Respondent of a change of its designated Project Coordinator. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the RPM at the following address:

Samantha Urquhart-Foster
Superfund Remedial and Site Evaluation Branch
U.S. Environmental Protection Agency
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960
(404) 562-8760
Urquhart-Foster.Samantha@epa.gov

35. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager by the NCP. In addition, EPA's Project Coordinator shall have the authority consistent with the NCP, to halt any Work required by this Settlement Agreement, and to take any necessary response action when s/he determines that conditions for the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA

Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work, unless otherwise specified by EPA.

36. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). Such person shall have the authority to observe Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

IX. WORK TO BE PERFORMED

37. Activities and Deliverables. Respondent shall conduct activities and submit plans, reports, or other deliverables as provided by the attached SOW, which is incorporated by reference, for the development of the RI/FS. All such Work shall be conducted in accordance with the provisions of this Settlement Agreement, the SOW, CERCLA, the NCP, and EPA guidance, including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance), and guidance referenced therein, and guidance referenced in the SOW, as may be amended or modified by EPA. The activities, plans, reports, and other deliverables identified in the SOW shall be developed and shall be submitted to EPA as provided for in the SOW and Work Plans. All Work performed under this Settlement Agreement shall be in accordance with the schedules in this Settlement Agreement or established in the SOW, and in full accordance with the standards, specifications, and other requirements of the Work Plans, as initially approved or modified by EPA, and as may be amended or modified by EPA from time to time. In accordance with the schedules established in this Settlement Agreement or in the SOW, Respondent shall submit to EPA and the State two (2) copies of all plans, reports, and other deliverables required under this Settlement Agreement, the SOW and the Work Plans. All plans, reports and other deliverables will be reviewed and approved by EPA pursuant to Section X (EPA Approval of Plans and Other Submissions). Upon EPA's request, Respondent shall also provide copies of plans, reports, or other deliverables to Community Advisory Groups, Technical Assistance Grant recipients, or any other entities as directed by EPA. Respondent shall also submit in electronic form all portions of any plan, report, or other deliverable Respondent is required to submit pursuant to provisions of this Settlement Agreement.

38. Upon receipt of the draft FS report, EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed and will evaluate the durability, reliability, and effectiveness of any proposed Institutional Controls.

39. Modification of the Work Plans.

a. If at any time during the RI/FS process, Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional data to the EPA Project Coordinator within fourteen (14) days of identification. EPA in its discretion will determine whether the additional data will be collected by Respondent and whether it will be incorporated into plans, reports, and other deliverables.

b. In the event of unanticipated or changed circumstances for the Site, Respondent shall notify the EPA Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the unanticipated or changed circumstance warrants changes in the Work Plan(s), EPA shall modify or amend the Work Plan(s) in writing accordingly. Respondent shall perform the Work Plan(s) as modified or amended.

c. EPA may determine that in addition to tasks defined in the initially approved Work Plans, other additional Work may be necessary to accomplish the objectives of the RI/FS. Respondent agrees to perform these response actions in addition to those required by the initially approved Work Plans, including any approved modifications, if EPA determines that such actions are necessary for a complete RI/FS.

d. Respondent shall confirm its willingness to perform the additional Work in writing to EPA within seven (7) days of receipt of the EPA request. If Respondent objects to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution). The SOW and/or Work Plan(s) shall be modified in accordance with the final resolution of the dispute.

e. Respondent shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the Work Plan(s) or written Work Plan(s) supplement. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondent, and/or to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions for the Site.

40. Off-Site Shipment of Waste Material. Respondent shall, prior to any off-site shipment of Waste Material from the Site activities, to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to EPA's Designated Project Coordinator. However, this notification requirement shall not apply to any off-site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. Respondent shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the remedial investigation and feasibility study. Respondent shall provide the information required by Subparagraph 40.a and 40.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Before shipping any hazardous substances, pollutants, or contaminants from the Site activities to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site activities to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

41. Meetings. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

42. Progress Reports. In addition to the plans, reports, and other deliverables set forth in this Settlement Agreement, Respondent shall provide to EPA and NCDENR monthly progress reports by the twentieth day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (a) describe the actions that have been taken to comply with this Settlement Agreement during that month, (b) include all results of sampling and tests and all other data received by Respondent, (c) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for RI/FS completion, and (d) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

43. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work that causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the EPA Project Coordinator at (404) 562-8760 or, in the event of her unavailability, the Regional Duty Officer at (404) 562-8700, of the incident or the Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Future Response Costs).

b. In addition, in the event of any release of a hazardous substance from the Site activities, Respondent shall immediately notify the RPM or Regional Duty Officer at (404) 562-8700 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within three (3) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the recurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

44. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondent EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within fourteen (14) days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

45. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 44.a., b., c., or d., Respondent shall proceed to take any action required by the plan, report, or other deliverable, as approved or modified by EPA subject only to its right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 44.c and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVI (Stipulated Penalties).

46. Resubmission.

a. Upon receipt of a notice of disapproval, Respondent shall, within fourteen (14) days, or such longer time if specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the fourteen (14)-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 47 and 48, respectively.

b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondent shall not proceed with any activities or tasks dependent on the following deliverables until receiving EPA approval, approval on condition, or modification of such deliverables: the NAPL Work Plan, Work Plan for Monitoring of Drinking Water Wells, Vapor Intrusion Assessment Work Plan, RI/FS Work Plan, RI Sampling and Analysis Plan, Draft Remedial Investigation Report, and Draft Feasibility Study Report. While awaiting EPA approval, approval on condition, or modification of these deliverables, Respondent shall proceed with all other tasks and activities that may be conducted independently of these deliverables, in accordance with the schedule set forth under this Settlement Agreement.

d. For all remaining deliverables not listed above in Paragraph 44.c, Respondent shall proceed with all subsequent tasks, activities, and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS.

47. If EPA disapproves a resubmitted plan, report, or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report, or other deliverable. Respondent shall implement any such plan, report, or deliverable as corrected, modified, or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XV (Dispute Resolution).

48. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately unless Respondent invokes the dispute resolution procedures in accordance with Section XV (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, substantially modified, or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XV, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

49. In the event that EPA takes over some of the tasks, Respondent shall incorporate and integrate information supplied by EPA into the final reports.

50. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

51. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondent's deliverables, Respondent is responsible for preparing deliverables acceptable to EPA.

XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

52. Quality Assurance. Respondent shall assure that Work performed, samples taken, and analyses conducted conform to the requirements of the SOW, the QAPP, and guidance identified therein. Respondent will assure that field personnel used by Respondent are properly trained in the use of field equipment and in chain of custody procedures. Respondent shall only use laboratories that have a documented quality system that complies with "EPA Requirements for

Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001; Reissued May 2006) or equivalent documentation as determined by EPA.

53. Sampling.

a. All results of sampling, tests, modeling, or other data (including raw data) generated by Respondent, or on Respondent's behalf, during the period that this Settlement Agreement is effective, shall be submitted to EPA in the next monthly progress report as described in Paragraph 42. EPA will make available to Respondent validated data generated by EPA, unless it is exempt from disclosure by any federal or state law or regulation.

b. Respondent shall verbally notify EPA and the State at least twenty-one (21) days prior to conducting significant field events as described in the SOW, NAPL Work Plan, Work Plan for Monitoring of Drinking Water Wells, Vapor Intrusion Assessment Work Plan, RI/FS Work Plan, or RI Sampling and Analysis Plan. At EPA's verbal or written request, or the request of EPA's oversight assistant, Respondent shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) or the State of any samples collected in implementing this Settlement Agreement. All split samples of Respondent shall be analyzed by the methods identified in the QAPP.

54. Access to Information.

a. Respondent shall provide to EPA and the State, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to the Site activities or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which Respondent asserts business confidentiality claims.

c. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege in lieu of providing documents, they shall provide EPA and the State with the following: (i) the title of the document, record, or information;

(ii) the date of the document, record, or information; (iii) the name and title of the author of the document, record, or information; (iv) the name and title of each addressee and recipient; (v) a description of the contents of the document, record, or information; and (vi) the privilege asserted by Respondent. However, no documents, reports, or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged or confidential.

d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site activities.

55. In entering into this Settlement Agreement, Respondent waives any objections to any data gathered, generated, or evaluated by EPA, the State or Respondent in the performance or oversight of the Work that has been verified according to the quality assurance/quality control (QA/QC) procedures required by the Settlement Agreement or any EPA-approved Work Plans or Sampling and Analysis Plans. If Respondent objects to any other data relating to the RI/FS, Respondent shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within fifteen (15) days of the monthly progress report containing the data.

XII. SITE ACCESS AND INSTITUTIONAL CONTROLS

56. If the Site activities require access to any property to implement this Settlement Agreement, and that property is owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA and the State, and their representatives, including contractors, with access at all reasonable times to the property, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

57. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within thirty (30) days after the Effective Date, or as otherwise specified in writing by the EPA Project Coordinator. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. Respondent shall describe in writing its efforts to obtain access. If Respondent cannot obtain access agreements, EPA may either (a) obtain access for Respondent or assist Respondent in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate; (b) perform those tasks or activities with EPA contractors; or (c) terminate the Settlement Agreement. Respondent shall reimburse EPA for all costs and attorneys' fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Future Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondent shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports, and other deliverables.

58. Notwithstanding any provision of this Settlement Agreement, EPA and the State retain all of their access authorities and rights as well as all of their rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIII. COMPLIANCE WITH OTHER LAWS

59. Respondent shall comply with all applicable state and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIV. RETENTION OF RECORDS

60. During the pendency of this Settlement Agreement and for a minimum of fifteen (15) years after completion of construction of any remedial action, Respondent shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until fifteen (15) years after completion of construction of any remedial action, Respondent shall also instruct its contractors and agents to preserve all documents, records, and other information of whatever kind, nature, or description relating to performance of the Work.

61. At the conclusion of this document retention period, Respondent shall notify EPA's technical and legal contacts at least ninety (90) days prior to the destruction of any such documents, records, or other information, and, upon request by EPA, Respondent shall deliver any such documents, records, or other information, as instructed, to EPA. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, they shall provide EPA with the following: (a) the title of the document, record, or other information; (b) the date of the document, record, or other information; (c) the name and title of the author of the document, record, or other information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or other information; and (f) the privilege asserted by Respondent. However, no documents, records or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged or confidential.

62. Respondent hereby certifies that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since the earlier of notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for

information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XV. DISPUTE RESOLUTION

63. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

64. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, it shall notify EPA in writing of its objection(s) within thirty (30) days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have thirty (30) days from EPA's receipt of Respondent's written objection(s) to resolve the dispute (the Negotiation Period). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally.

65. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA Region 4 management official at the Superfund Division Director level or higher will issue a written decision. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirements that were the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs, and regardless of whether Respondent agrees with the decision.

XVI. STIPULATED PENALTIES

66. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 67 and 68 for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVII (Force Majeure). "Compliance" by Respondent shall include completion of the Work under this Settlement Agreement or any activities contemplated under any RI/FS Work Plan or other plan approved under this Settlement Agreement identified below, in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

67. Stipulated Penalty Amounts - Work (Including Payments).

a. The following stipulated penalties shall accrue per day for any noncompliance identified in Paragraph 67.b:

Penalty Per Violation Per Day

Period of Noncompliance

\$ 500	1 st through 14 th day
\$ 1,000	15 th through 30 th day
\$ 3,000	31 st day and beyond

b. Compliance Milestones

- i. The stipulated penalties set forth in Paragraph 67.a shall accrue as a result of any of the following activities: Failure to timely submit a draft Work Plan, draft Sampling and Analysis Plan, draft RI Report, draft Risk Assessment, and draft FS Report as required under this Settlement Agreement;
- ii. Failure to timely submit any modifications requested by EPA or its representatives to a Work Plan, the Sampling and Analysis Plan, draft RI Report, draft Risk Assessment, and draft FS Report as required under this Settlement Agreement;
- iii. Failure to timely submit payment of Future Costs as provided in Section XVIII; and
- iv. Failure to comply with the schedule set forth in any EPA-approved Work Plan.

68. Stipulated Penalty Amounts - Reports.

a. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other written documents pursuant to Paragraphs 37 and 42, other than those documents and reports specifically referenced in Paragraph 67.b.

Penalty Per Violation Per Day

Period of Noncompliance

\$ 500	1 st through 14 th day
\$ 1,000	15 th through 30 th day
\$ 3,000	31 st day and beyond

69. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 86 (Work Takeover), Respondent shall be liable for a stipulated penalty in the amount of \$50,000.

70. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 10th day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (b) with respect to a decision by the EPA management official designated in Paragraph 65 of Section XV (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

71. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the same and describe the noncompliance. EPA may send Respondent a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.

72. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XV (Dispute Resolution). Respondent shall make all payments required by this Paragraph to EPA by Fedwire Electronic Funds Transfer to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read:
"D 68010727 Environmental Protection Agency"

and shall reference stipulated penalties, Site/Spill ID Number A4P5, and the EPA docket number for this action. At the time of payment, Respondent shall send notice that payment has been made as provided in Paragraph 80.b below.

73. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.

74. Penalties shall continue to accrue as provided in Paragraph 66 during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

75. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 71.

76. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Settlement Agreement, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 86. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XVII. FORCE MAJEURE

77. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, *force majeure* is defined as any event arising from causes beyond the control of Respondent or of any entity controlled by Respondent, including but not limited to, its contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

78. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within three (3) days of when Respondent first knew that the event might cause a delay. Within five (5) days thereafter, Respondent shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

79. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the

length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. PAYMENT OF FUTURE RESPONSE COSTS

80. Payments of Future Response Costs.

a. Respondent shall pay EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that includes a SCORPIOS Report, which includes oversight, direct and indirect costs incurred by EPA and its contractors. Respondent shall make all payments within thirty (30) days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 78 of this Settlement Agreement. Payments shall be made to EPA by Fedwire Electronic Funds Transfer ("EFT") to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read:
"D 68010727 Environmental Protection Agency"

and shall reference Site/Spill ID Number A4P5 and the EPA docket number for this action.

b. At the time of payment, Respondent shall send notice that payment has been made to Samantha Urquhart-Foster and Paula V. Painter, U.S. Environmental Protection Agency Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303, and to the EPA Cincinnati Finance Office by email at acctsreceivable.cinwd@epa.gov, or by mail to

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

Such notice shall reference the Site name, Site/Spill ID Number A4P5 and the EPA docket number for this action.

c. The total amount to be paid by Respondent pursuant to Paragraph 80.a shall be deposited by EPA in the CTS of Asheville, Inc. Site Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

81. Interest. If Respondent does not pay Future Response Costs within thirty (30) days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If EPA receives a partial payment, Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments

under this Section, including but not limited to, payments of stipulated penalties pursuant to Section XVI. Respondent shall make all payments required by this Paragraph in the manner described in Paragraph 80.

82. Respondent may contest payment of any Future Response Costs billed under Paragraph 80 if they determine that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. Such objection shall be made in writing within thirty (30) days of receipt of the bill and must be sent to the EPA Project Coordinator. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondent shall, within the thirty (30) day period, pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 80. Simultaneously, Respondent shall establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation, and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the EPA Project Coordinator and Paula V. Painter, U.S. Environmental Protection Agency Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303, a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. In establishing the escrow account, EPA shall not be requested to sign any documents associated with establishing the account or maintaining the account or the monies it so contains. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If EPA prevails in the dispute, within five (5) days of the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 80. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to EPA in the manner described in Paragraph 80. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its Future Response Costs.

XIX. COVENANT NOT TO SUE BY EPA

83. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Site Work performed and for recovery of Future Response Costs. This covenant not to sue shall take effect upon receipt by EPA of any Interest or Stipulated Penalties due for failure to pay Future Response Costs as required by Sections XVIII and XVI of this Settlement Agreement. This covenant not to sue is conditioned upon the complete and satisfactory performance by Respondent of its obligations under this Settlement Agreement,

including, but not limited to, payment of Future Response Costs pursuant to Section XVIII. This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

84. Except as specifically provided in this Settlement Agreement, nothing in this Settlement Agreement shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement Agreement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

85. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definition of Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials in the areas where the Site activities were or are conducted; and
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site not paid as Future Response Costs under this Settlement Agreement.

86. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, is seriously or repeatedly deficient or late in its performance of the Work, or is implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondent may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondent shall pay pursuant to

Section XVIII (Payment of Future Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENT

87. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the Work or arising out of the response actions for which the Future Response Costs have or will be incurred, including any claim under the United States Constitution, the North Carolina Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or state law relating to the Work or payment of Future Response Costs.

88. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

89. Claims Against De Micromis Parties. Respondent agrees not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) or 113 of CERCLA) that they may have for all matters relating to the Site against any person where the person's liability to Respondent with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances, or having accepted for transport for disposal or treatment of hazardous substances, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the remedial activities conducted under the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

90. The waiver in Paragraph 89 shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:

a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of RCRA, or has impeded or is impeding,

through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

b. that the materials containing hazardous substances contributed to the Site by such person have contributed significantly, or could contribute significantly, either individually or in the aggregate, to the cost of response action or natural resource restoration for the Site.

XXII. OTHER CLAIMS

91. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent.

92. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages, and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

93. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. EFFECT OF SETTLEMENT/CONTRIBUTION

94. Nothing in this Settlement Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement Agreement. Each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this Settlement Agreement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

95. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law, for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs. The Parties further agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.

96. Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement Agreement, notify EPA in writing no later than sixty (60) days prior to the initiation of such suit or claim. Respondent also shall, with respect to any suit or claim brought against it for matters related to this Settlement Agreement, notify EPA in writing within ten (10) days of service of the complaint or claim upon it. In addition, Respondent shall notify EPA within ten (10) days of service or receipt of any Motion for Summary Judgment and within ten (10) days of receipt of any order from a court setting a case for trial, for matters related to this Settlement Agreement.

97. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other relief relating to the Site, Settling Parties shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant by EPA set forth in Section XIX.

98. Effective upon signature of this Settlement Agreement by Respondent, Respondent agrees that the time period after the date of its signature shall not be included in computing the running of any statute of limitations potentially applicable to any action brought by the United States related to the "matters addressed" as defined in Paragraph 95 and that, in any action brought by the United States related to the "matters addressed," Respondent will not assert, and may not maintain, any defense or claim based upon principles of statute of limitations, waiver, laches, estoppel, or other defense based on the passage of time after its signature of this Settlement Agreement. If EPA gives notice to Respondent that it will not make this Settlement Agreement effective, the statute of limitations shall begin to run again commencing ninety (90) days after the date such notice is sent by EPA.

XXIV. INDEMNIFICATION

99. Respondent shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys' fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

100. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

101. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between anyone and Respondent and any person for performance of Work on or relating to the Site. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between anyone and Respondent and any person for performance of Work on or relating to the Site.

XXV. CONTRIBUTION PROTECTION

102. The Parties agree that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs. Nothing in this Settlement Agreement precludes the United States or Respondent from asserting any claims, causes of action, or demands against any person not parties to this Settlement Agreement for indemnification, contribution, or cost recovery.

XXVI. INSURANCE

103. At least thirty (30) days prior to commencing any on-site Work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVII. FINANCIAL ASSURANCE

104. Within fifteen (15) days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of \$1,000,000 in order to secure the full and final completion of Work by Respondent. For purposes of this Settlement Agreement, Respondent's financial assurance obligation may be satisfied through the irrevocable standby letter of credit currently in place pursuant to the terms of the 2004 AOC between EPA and Respondent. Alternatively, Respondent may provide financial assurance in one or more of the following forms:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;

b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;

c. a trust fund administered by a trustee acceptable in all respects to EPA;

d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

e. a written guarantee to pay for or perform the Work provided by one or more parent companies of Respondent, or by one or more unrelated companies that have a substantial business relationship with Respondent, including a demonstration that any such guarantor company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or

f. a demonstration of sufficient financial resources to pay for the Work made by Respondent, which shall consist of a demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

105. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, to be determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within ten (10) days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 104, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within ten (10) days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

106. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Paragraph 104.e or 104.f, Respondent shall (a) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (b) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, beginning on May 1, 2012, or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be the current cost estimate for the Site, plus any other RCRA, CERCLA, TSCA, or other federal environmental obligations financially assured by the relevant Respondent or guarantor to EPA by means of passing a financial test.

107. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 104 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to

the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution). Thereafter, Respondent may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

108. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVIII. INTEGRATION/APPENDICES

109. This Settlement Agreement and its appendices and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc. that will be developed pursuant to this Settlement Agreement and become incorporated into and enforceable under this Settlement Agreement constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement: "Appendix A" is the SOW.

XXIX. ADMINISTRATIVE RECORD

110. EPA will determine the contents of the administrative record file for selection of the remedial action. Respondent shall submit to EPA documents developed during the course of the RI/FS upon which selection of the response action may be based, including documents relied on by Respondent that were generated by EPA. Upon request of EPA, Respondent shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports, and other reports. Upon request of EPA, Respondent shall additionally submit any previous studies conducted under state, local, or other federal authorities relating to selection of the response action, and all communications between Respondent and state, local, or other federal authorities concerning selection of the response action. At EPA's direction, Respondent shall establish a community information repository at or near the Site in a location convenient to the community to house one copy of the administrative record

XXX. NOTICE OF COMPLETION OF WORK

111. When EPA determines that all Work has been fully performed and all Response Costs have been paid in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to record retention and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that

continuing obligations required by this Settlement Agreement, including but not limited to record retention and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the relevant Work Plans if appropriate in order to correct such deficiencies, in accordance with Paragraph 39 (Modification of Work Plans). Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXXI. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

112. This Settlement Agreement shall be effective immediately after the Settlement Agreement is signed by the Regional Administrator or his/her delegate.

113. This Settlement Agreement may be amended by mutual agreement of EPA and Respondent. Amendments shall be in writing and shall be effective when signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Settlement Agreement.

114. No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

Agreed this 25th day of January, 2012.

For Respondent QTS Corporation:

By: 

Richard G. Cutter III

Title: V.P., Law & Business Affairs,
Corporate Secretary

It is so ORDERED AND AGREED this 26TH day of JANUARY, 2012.

BY: 

DATE: 1/26/12

R. Donald Rigger, Chief
Superfund Remedial and Site Evaluation Branch
U.S. Environmental Protection Agency, Region 4

EFFECTIVE DATE: January 26, 2012

ATTACHMENT A

**STATEMENT OF WORK
REMEDIAL INVESTIGATION, FEASIBILITY STUDY AND BASELINE RISK
ASSESSMENT
CTS OF ASHEVILLE, INC. SITE, ASHEVILLE, NORTH CAROLINA**

Table of Contents

LIST OF ACRONYMS AND ABBREVIATIONS	2
INTRODUCTION.....	3
1.0 TASK 1 – SCOPING	5
1.1 Site Background.....	7
1.2 Project Planning.....	7
1.3 Scoping Deliverables	8
2.0 TASK 2 – COMMUNITY RELATIONS.....	12
3.0 TASK 3 – SITE CHARACTERIZATION AND REUSE ASSESSMENT	13
3.1 Field Investigation	14
3.2 Data Analysis	16
3.3 Data Management Procedures	17
3.4 Site Characterization Deliverables.....	17
3.5 Reuse Assessment.....	19
4.0 TASK 4 – TREATABILITY STUDIES.....	19
4.1 Determination of Candidate Technologies and the need for Treatability Studies	19
4.2 Treatability Study Deliverables	20
5.0 TASK 5 – BASELINE RISK ASSESSMENT	21
5.1 Risk Assessment Methodology.....	21
5.2 Risk Assessment Deliverables	22
6.0 TASK 6 – DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES.....	23
6.1 Development and Screening of Remedial Action Alternatives	23
6.2 Alternatives Development and Screening Deliverables	25
7.0 TASK 7 – DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES	25
7.1 Detailed Analysis of Alternatives	25
7.2 Detailed Analysis Deliverables.....	26

LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Administrative Settlement Agreement and Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirements
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLP	Contract Laboratory Program
CSAP	Confirmation Sampling and Analysis Plan
DQO	Data Quality Objectives
EDD	Electronic Data Deliverable
EPA	United States Environmental Protection Agency
FS	Feasibility Study
FSAP	Field Sampling and Analysis Plan
HASP	Health and Safety Plan
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
IRM	Interim Response Measure
NAPL	Non-Aqueous Phase Liquid
OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Emergency Response
PRG	Preliminary Remediation Goal
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance and Quality Control
RGO	Remedial Goal Options
RI	Remedial Investigation
RI/FS	Remedial Investigation / Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SOW	Statement of Work
TAL	Target Analyte List
TAP	Technical Assistance Plan
TCL	Target Compound List

INTRODUCTION

The United States Environmental Protection Agency (EPA), Region 4, Superfund remedial program plans to address the CTS of Asheville, Inc. Site (the Site) to expedite remediation of the Site in order of the highest priority. Releases of hazardous substances, pollutants or contaminants occurred at the property located at 235 Mills Gap Road in Asheville, North Carolina, which resulted in migration of contamination beyond the property boundaries. The Site includes the property at 235 Mills Gap Road, as well as locations where hazardous substances, pollutants or contaminants emanating from this property have come be located.

The purpose of this Remedial Investigation/Feasibility Study (RI/FS) and Baseline Risk Assessment (BRA) is to investigate the nature and extent of contamination, assess the current and potential risk to public health, welfare, and the environment, and to develop and evaluate potential Remedial Action Alternatives. The Remedial Investigation (RI) and Feasibility Study (FS) are interactive and shall be conducted concurrently so that the data compiled and collected in the RI influences the development of Remedial Action Alternatives in the FS, which in turn affects any data needs and the scope of any potential Treatability Studies. Historical data and data collected during the RI will influence the development of the BRA.

EPA has collected substantial information during the past few years of sampling drinking water wells and monitoring wells in the area. As of December 2011, EPA has conducted twelve quarterly drinking water well sampling events at over 100 homes. EPA also conducted other ground water investigation events to support the proposal of the Site to the National Priorities List. Respondent has performed limited ground water investigations.

However, the vertical and horizontal extent of ground water contamination has not been fully delineated. Until the completion of the RI/FS for the groundwater contamination, Respondent will either provide an Interim Response Measure (IRM) to mitigate potential risks associated with drinking ground water or conduct quarterly sampling and analysis of private wells located within a one mile radius of the former plant at the Site that relies on well or spring water as their drinking water source, in accordance with the terms of this SOW. If an IRM for drinking water is implemented by the Respondent, the frequency of quarterly well sampling requirements will be reduced. The frequency will be determined at a later date and will be based on the type of response action implemented. Respondent shall submit to EPA the sample results and draft letters to homeowners. EPA will transmit the data and letters to the homeowners.

Respondent will address the ground water that is discharging to the surface that is or may be contaminating surface water, sediment and air, as well as the vapor intrusion pathway. Respondent evaluated and implemented certain removal and treatment options for the springs during the removal activities under the 2004 AOC. However, the options have not been effective at significantly reducing the concentrations of volatile organic compounds (VOCs) being discharged from the ground water into the springs.

EPA conducted a vapor intrusion assessment as part of the removal activities a few years ago. However, because vapor concentrations vary from season to season, EPA believes that further assessment is needed as the ground water pathway is delineated. Accordingly, the RI/FS will address the contamination on the source property, as well as locations to which contamination has

migrated which will include, at a minimum, contaminated soil which was not completely remediated by the removal action and the contaminated ground water plume.

Respondent shall conduct an RI/FS, including a BRA, and shall produce an RI/FS Report that is in accordance with this SOW, the *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*¹, (Interim Final) (EPA Office of Solid Waste and Emergency Response (OSWER), October 1988) (the RI/FS Guidance), the *National Oil and Hazardous Substances Pollution Contingency Plan*² (March 8, 1990) and other guidance and regulations, and the requirements set forth in the Settlement Agreement. Respondent shall also produce a Human Health Risk Assessment Report (HHRA) and a Remedial Goal Options (RGO) Technical Memorandum. The following website includes links to many guidance and policy documents related to the RI/FS and BRA process:

<http://www.epa.gov/superfund/policy/remedy/sfremedy/index.htm>.

Guidance documents describe the report format and the required report content. Respondent shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS, Treatability Studies and BRA, except as otherwise specified in the Settlement Agreement.

The purpose of this SOW is to set forth the requirements for conducting an RI/FS and BRA and to aid EPA in the selection of a remedy to eliminate, reduce, or control risks to human health and the environment related to the Site. This SOW is designed to provide the framework for conducting the RI/FS and BRA activities. The goal is to engage the amount of data necessary to support the selection of an approach for remediation and then to use this data to create a well-supported Record of Decision (ROD) within two years of the approval of the RI/FS Work Plan, or such shorter or longer time as may be necessitated by Site-specific conditions, and as approved by EPA.

Respondent is expected develop an RI/FS Work Plan that builds on the Site characterization work conducted during previous Site investigations, quarterly drinking water well sampling, prior or subsequent removal actions, and data collected during facility operations.

At the completion of the RI/FS, EPA shall be responsible for the selection of a remedy. EPA will document this selection of a remedy in a ROD. The Remedial Action Alternative selected by EPA will meet the cleanup standards specified in Section 121 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). That is, the selected remedial action will be protective of human health and the environment, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements (ARARs) of other laws or regulations, and will address the statutory preference for treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The Final RI/FS Report, as adopted by EPA, along with the Administrative Record, will

¹ This document can be found on the Internet at:
<http://www.epa.gov/superfund/policy/remedy/pdfs/540g-89004-s.pdf>

² This regulation can be found on the Internet at:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr300_main_02.tpl

form the basis for the selection of the remedy to be implemented and will provide the information necessary to support the development of the ROD.

As specified in Section 104(a)(1) of CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), EPA must provide oversight of Respondent's activities throughout the RI/FS. Respondent shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the primary responsibility for conducting an adequate RI/FS to enable and support the potential selection of a remedy shall lie with Respondent. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that Respondent shall submit for RI/FS and BRA are included within each Task description. Respondent shall incorporate those deliverables into a schedule of RI/FS and BRA activities and include the schedule in the RI/FS Work Plan.

1.0 TASK 1 – SCOPING

Scoping is the initial planning process of the RI/FS and has been initiated by EPA to determine the site-specific objectives of the RI/FS prior to negotiations between Respondent and EPA. Scoping is continued, repeated as necessary, and refined throughout the RI/FS process. In addition to developing the Objectives of the RI/FS, EPA has developed a Site Management Strategy. Consistent with the Site Management Strategy, the specific project scope shall be planned by Respondent and EPA. Respondent shall document the specific project scope in the RI/FS Work Plan. Because the work required to perform an RI/FS is not fully known at the onset, and is phased in accordance with a Site's complexity and the amount of available information, it may be necessary to modify the Work Plan(s) during the RI/FS to satisfy the objectives of the study.

The Objectives have been determined preliminarily, based on available information, to be the following:

- Performance of the January 13, 2012 Soil Vapor Extraction Confirmation Sampling and Analysis Plan, Revision 7 ("CSAP"), as supplemented by an additional sampling and analysis plan for non-aqueous phase liquids in the saturated zone ("NAPL Plan").
- Review of existing information pertaining to the Site. This review includes, but is not limited to, EPA Site Inspection Reports, the EPA Hazardous Ranking System Scoring package, information obtained during the removal action, information obtained by EPA during quarterly sampling of drinking water wells, reports from local, State and Federal agencies, court records, information from local businesses such as local well drillers and waste haulers and generators, facility records, and information from facility owners and employees and nearby citizens.
- Review of relevant guidance to understand the remedial process. This information shall be used in performing the RI/FS and preparing all deliverables under this SOW.

- Conduct sampling and analysis of drinking water wells within an approximate one mile radius of the former plant at the Site, an area that may be expanded or contracted depending upon the results of such well testing, installation of an Interim Response Measure, data produced in the RI and such other data or information as relevant to determine the necessity and efficacy of the water well sampling and analysis.
- Determination of the nature and lateral and vertical extent of contamination (waste types, concentrations and distributions) for all affected media including air, ground water, soil, surface water, and sediment, etc.
- Performance of a well survey between a one and three mile radius of the location of Respondent's former plant at the Site, based upon data collected during the RI regarding the actual location of ground water contamination at the Site attributable to Respondent. Such new groundwater information may require or allow Respondent to increase or decrease the radius for the well survey. Surveys shall include determining water uses, well construction methods used, the number and age of users and the volume and rate of water usage.
- Identification of all Federal and State ARARs
- Identification and screening of potential treatment technologies.
- Detailed analysis of Remedial Action Alternatives.
- Assembly of technologies into Remedial Action Alternatives and screening of alternatives.
- Performance of bench or pilot Treatability Studies, if determined necessary.

The Site Management Strategy includes the following:

- A complete investigation of the Site, including any and all off-site contamination which may have been caused by contaminants originating from the Site.
- Evaluation of the Site in order to expedite remediation of the Site in the order of highest priority.
- EPA oversight of Respondent's performance of the work to ensure compliance with applicable laws, regulations and guidance and to ensure that the work proceeds in a timely fashion.
- EPA management of the Remedy Selection and ROD phase with input from State Agencies, Natural Resource Trustees and the Public (including Respondent).

When scoping the specific aspects of a project, Respondent must meet with EPA to discuss all project planning decisions and special concerns associated with the Site. The following activities shall be performed by Respondent as a function of the project planning process.

1.1 Site Background

Respondent shall gather and analyze the existing background information regarding the Site and shall conduct a visit to the Site to assist in planning the scope of the RI/FS.

1.1.1 Collect and Analyze Existing Data and Document the Need for Additional Data

All existing Site data shall be thoroughly compiled and reviewed. Specifically, this compilation and review shall include currently available data relating to the varieties and quantities of hazardous substances at the Site that may be contributing to contamination of adjacent parcels and past disposal practices (what type of contaminants were dumped where, when, and by whom). This compilation and review shall also include results from any previous sampling or other investigations that may have been conducted. This information shall be utilized in determining additional data needed for the characterization of the nature and extent of contamination, better defining of potential ARARs, and developing a range of preliminarily identified Remedial Action Alternatives. Subject to EPA approval, Data Quality Objectives (DQOs) shall be established that specify the usefulness of existing data. Decisions on the necessary data and DQOs shall be made by EPA.

1.1.2 Conduct Site Visit

Respondent shall conduct a visit to the Site with the EPA Remedial Project Manager (RPM) during the project scoping phase to assist in developing a conceptual understanding of areas of contamination as well as potential exposure pathways and receptors at the Site. During the visit to the Site Respondent shall observe the physiography, hydrology, geology, and demographics of the Site as well as related natural resource, ecological and cultural features. This information shall be utilized to better scope the project and to determine the extent of additional data necessary to characterize the contamination, better define potential ARARs, and narrow the range of preliminarily identified Remedial Action Alternatives.

1.2 Project Planning

Once Respondent has collected and analyzed existing data and conducted a visit to the Site, the specific project scope shall be planned. Project planning activities include those tasks described below as well as the development of specific required deliverables as described in paragraph 1.3. Respondent shall meet with EPA, either in person or via conference call, regarding the following activities and before the drafting of the scoping deliverables.

1.2.1 Refine the Objectives and Develop Preliminary Remedial Action Objectives and Alternatives

Once existing information about the Site has been analyzed and a conceptual understanding of the potential risks posed by the Site has been obtained, Respondent shall review and, if necessary, refine the Objectives and develop preliminary remedial action objectives. Any revised Objectives shall be

documented in a technical memorandum and are subject to EPA approval prior to development of the other scoping deliverables. Respondent shall then identify a preliminary range of broadly defined potential Remedial Action Alternatives and associated technologies. The range of potential alternatives shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of the waste, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative. Institutional Controls shall also be evaluated as a remedy component.

1.2.2 Document the Need for Treatability Studies

If remedial actions involving treatment have been identified by Respondent or EPA, Treatability Studies shall be required only if EPA determines that they are needed. Where Treatability Studies are needed, identification of possible technologies and screening shall be done and the results submitted with the RI/FS Work Plan. Initial Treatability Study activities (such as research and study design) shall be planned to occur concurrently with Characterization activities (see Tasks 3 and 4).

1.2.3 Begin Preliminary Identification of Potential ARARs

Respondent shall conduct a preliminary identification of potential State and Federal ARARs (chemical-specific, location-specific, and action-specific) to assist in the refinement of remedial action objectives and the initial identification of Remedial Action Alternatives and ARARs associated with particular actions. ARAR identification shall continue as conditions and contaminants at the Site and Remedial Action Alternatives are better defined.

1.3 Scoping Deliverables

Within fourteen (14) days after the Effective Date, Respondent shall submit the NAPL Work Plan and a Health and Safety Plan. Within thirty (30) days after the Effective Date, Respondent shall submit a Work Plan related to monitoring of private drinking water wells that are located within a one mile radius of the former plant at the Site. Within forty-five (45) days after the Effective Date, Respondent shall submit a Vapor Intrusion Assessment Work Plan. Within one hundred eighty (180) days after the Effective Date, Respondent shall submit a RI/FS Work Plan and a RI Sampling and Analysis Plan. The NAPL Work Plan, Work Plan for Monitoring of Drinking Water Wells, Vapor Intrusion Assessment Work Plan, RI/FS Work Plan and RI Sampling and Analysis Plan must be reviewed and approved and the Health and Safety Plan reviewed by EPA prior to the initiation of field activities related to the specific work plan. All Work Plans that involve sampling activities shall be consistent with the requirements found in section 1.3.6.

1.3.1 NAPL Work Plan

Within fourteen (14) days after the Effective Date, Respondent shall submit the NAPL Work Plan. Within thirty (30) days of EPA's approval of the NAPL Work Plan, Respondent shall commence implementation of the CSAP and the NAPL Work Plan as a combined, integrated Work Plan.

1.3.2 Health and Safety Plan

Within fourteen (14) days after the Effective Date, Respondent shall submit a Health and Safety Plan (HASP) that has been prepared in conformance with Respondent's health and safety program, and in compliance with Occupational Safety and Health Administration (OSHA) regulations and protocols. The HASP shall include the eleven elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that EPA does not "approve" Respondent's HASP, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

1.3.3 Work Plan for Monitoring of Drinking Water Wells

Within thirty (30) days after the Effective Date, Respondent shall submit to EPA a Work Plan for Monitoring of Drinking Water Wells. The Work Plan shall be consistent with the current quarterly monitoring program thus far conducted by EPA. The Work Plan shall include a description of activities to be performed, a schedule for completion of these activities, access agreement strategy, a sampling and analysis plan and the details for sampling set forth in Section 3.1.6 of this SOW. This Work Plan may be modified after EPA approval of an IRM that addresses drinking water issues at the Site or as supported by EPA approved analytical data.

1.3.4 Vapor Intrusion Assessment Work Plan

Within forty five (45) days after the Effective Date, Respondent shall submit to EPA a Vapor Intrusion (VI) Assessment Work Plan. Because the full extent of contamination has not yet been defined, EPA anticipates that this document will be modified as more information comes to light. The initial VI Assessment Work Plan shall evaluate vapor intrusion at homes that are immediately contiguous to the Site and proximate to the currently known contaminated ground water plume. As more information about the contaminated plume is identified, the VI Assessment Work Plan shall be modified to address evaluation of the extended areas.

1.3.5 RI/FS Work Plan

Within one hundred eighty (180) days after the Effective Date, Respondent shall submit a RI/FS Work Plan documenting the decisions and evaluations completed during the scoping process for EPA review and approval. The RI/FS Work Plan shall be developed in conjunction with the RI Sampling and Analysis Plan,

although each plan may be delivered under separate cover. The RI/FS Work Plan shall include a comprehensive description of the work to be performed, the media to be investigated, the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity and submission of each deliverable shall also be included.

Specifically, the RI/FS Work Plan shall present the following:

- A statement of the problem(s) and potential problem(s) posed by the Site and the objectives of the RI/FS.
- A background summary setting forth the following:
 - a description of the Site, including the geographic location, and, to the extent possible, a description of the physiography, hydrology, geology, demographics, and the ecological, cultural, and natural resource features of the Site;
 - a synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site;
 - a summary of the existing data in terms of physical and chemical characteristics of the contaminants identified and their distribution in ground water.
- A description of the Site Management Strategy developed by EPA during scoping as discussed previously in this SOW and as may be modified with EPA's approval;
- A preliminary identification of Remedial Action Alternatives and data needs for evaluation of Remedial Action Alternatives. This preliminary identification shall reflect coordination with Treatability Study requirements (see Tasks 1 and 4).
- A process for identifying Federal and State ARARs (chemical-specific, location-specific, and action-specific).
- A process for conducting the BRA.
- A detailed description of the tasks to be performed, information needed for each task, information to be produced during and at the conclusion of each task, and a description of the work products that shall be submitted to EPA. This description must also include the deliverables set forth in the remainder of this SOW.

- A schedule for each of the required activities which will result in a well-supported ROD within two years of the approval of the RI/FS Work Plan, or such shorter or longer time as may be necessitated by Site-specific conditions, and as approved by EPA.
- A project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format, and backup data management), monthly reports to EPA, and meetings and presentations to EPA at the conclusion of each major phase of the RI/FS.

Respondent shall refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the required Work Plan.

Because of the unknown nature of the Site and iterative nature of the RI/FS, additional data requirements may be identified throughout the RI/FS process. Respondent shall submit a technical memorandum documenting any need for additional data along with the proposed DQOs whenever such requirements are identified. In any event, Respondent is responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of this RI/FS and the Settlement Agreement.

1.3.6 RI Sampling and Analysis Plan

Within one hundred eighty (180) days after the Effective Date, Respondent shall prepare a RI Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the established DQOs. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis.

The QAPP shall describe the project objectives and organization, functional activities, and Quality Assurance and Quality Control (QA/QC) protocols that shall be used to achieve the desired DQOs. The QAPP will be prepared in accordance with *EPA Requirements for Quality Assurance Project Plans (QAJR-5)* (EPA/240/B-01/003, March 2001 or subsequently issued guidance) and *EPA Guidance for Quality Assurance Project Plans (QAJG-5)* (EPA/600/R-02/009, December 2002 or subsequently issued guidance). The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan. In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and

data reduction, validation, and reporting. These procedures must be consistent with the Region 4 Field Branches Quality System and Technical Procedures³ which supersede the *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, November 2001*, and the *Ecological Assessment Standard Operating Procedures and Quality Assurance Manual, January 2002*. Field personnel shall be available for EPA QA/QC training and orientation, as required.

Respondent shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This demonstration must include use of methods and analytical protocols for the chemicals of concern (typically the Target Compound List (TCL) and the Target Analyte List (TAL)) in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must have and follow an EPA-approved Quality Assurance (QA) program. Respondent shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis. EPA may require that Respondent submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory. If a laboratory not currently participating in the CLP is selected, methods consistent with CLP methods that would be used at this Site for the purposes proposed and QA/QC procedures approved by EPA shall be used. Respondent shall only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E4 1994, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (American National Standard, January 5, 1995 or subsequently issued guidance) and *EPA Requirements for Quality Management Plans (QA/R-2)* (EPA/240/tB-01-002, March 2001 or subsequently issued guidance) or equivalent documentation as determined by EPA. In addition, if the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval must be granted prior to the shipment of Site samples to that laboratory for analysis.

2.0 TASK 2 – COMMUNITY RELATIONS

To the extent required by EPA, Respondent shall provide community relations support to EPA during the planning and implementation of the community involvement program. EPA will take the lead in the planning and implementation of the program. The RPM will oversee and direct all community relations activities performed to ensure that they are in accordance with the outline of

³ The Field Branches Quality System and Technical Procedures can be found at:
<http://www.epa.gov/region4/sesd/fbqstp/>

activities contained in this document and that they fulfill the statutory requirements as defined in CERCLA as amended by SARA. Tasks for which EPA may request support are outlined below.

- Community Involvement Work Plan Preparation
- Community Interviews
- Community Relations Plan Preparation
- Fact Sheet Preparation
- Public Meeting Assistance
- Public Notice Preparation

Upon request by EPA, the Respondent shall provide EPA with a Technical Assistance Plan (TAP) for providing and administering up to \$50,000 of Respondent's funds to be used by a qualified community group to hire independent technical advisers during the work at the Site. The community group must meet the requirements set forth in applicable regulations and guidance to be eligible to receive these funds.

3.0 TASK 3 – SITE CHARACTERIZATION AND REUSE ASSESSMENT

As part of the RI, Respondent shall perform the activities described in this task, including the preparation of a RI Report. The overall objective of Characterization is to describe areas that may pose a threat to human health or the environment. This objective is accomplished by first determining physiography, geology, and hydrology of the Site. Surface and subsurface pathways of migration shall also be defined. Respondent shall define the nature, extent, and volume of contamination, including physical and chemical constituents as well as concentrations at incremental locations in the affected media. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the RI/FS, the Work Plans, SAP, and HASP shall be implemented. Field data shall be collected and analyzed to provide the information required to accomplish the objectives of the study. Respondent shall notify EPA at least twenty one (21) days in advance of the field work regarding the planned dates for field activities, including installation of monitoring wells, installation and calibration of equipment, pump tests, sampling and analysis activities, and other field investigation activities. Respondent shall demonstrate that the laboratory and type of laboratory analyses that will be utilized during Characterization meets the specific QA/QC requirements and the DQOs as specified in the SAP. In view of the unknown conditions at the Site, activities are often iterative and, to satisfy the objectives of the RI/FS, it may be necessary for Respondent to supplement the work specified in the Work Plans. In addition to the deliverables below, Respondent shall provide a monthly progress report and participate in meetings with EPA at major points in the RI/FS.

3.1 Field Investigation

The field investigation includes the gathering of data to define physical characteristics, sources of contamination, and the nature and extent of contamination at the Site. These activities shall be performed by Respondent in accordance with the Work Plans and SAP. At a minimum, this investigation shall include the following activities:

3.1.1 Access

Respondent shall have the primary responsibility for obtaining access in support of field activities, including but not limited to staging of field activities, installation of monitoring wells, and the collection of samples. In the case of recalcitrant parties, EPA will provide the necessary enforcement support to secure access.

3.1.2 Implementing and Documenting Field Support Activities

Respondent shall initiate field support activities following approval of the Work Plans and SAP. Field support activities may include obtaining access to the Site, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or contractors. Respondent shall notify EPA at least twenty one (21) days prior to initiating field support activities so that EPA may adequately schedule oversight tasks. Respondent shall also notify EPA in writing upon completion of field support activities.

3.1.3 Investigating and Defining Site Physical and Biological Characteristics

Respondent shall collect data on the physical and biological characteristics of the Site, including the physiography, geology, and hydrology, and specific physical characteristics identified in the Work Plans. This information shall be ascertained through a combination of physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of the Site, Respondent shall also obtain sufficient engineering data to facilitate the objectives of the Site.

3.1.4 Defining Contamination

Respondent shall locate the lateral and vertical extent of contamination. For each location, the lateral and vertical extent of contamination shall be determined by sampling at incremental depths on a sampling grid or in another organized fashion approved by EPA. The physical characteristics and chemical constituents and concentrations shall be determined for the Site. Respondent shall conduct sufficient sampling to define the boundaries of the contaminated ground water to the level established in the QAPP and DQOs. Sources of contamination shall be analyzed for the potential of contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information necessary to evaluate treatment technologies.

3.1.5 Describing the Nature and Extent of Contamination

Respondent shall gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, Respondent shall utilize the information on Site physical characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. Respondent shall then implement an iterative monitoring program and any study program identified in the Work Plans or SAP such that, by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the Site can be determined. In addition, Respondent shall gather data for calculations of contaminant fate and transport. This process is continued until the lateral and vertical extent of contamination has been determined to the contaminant concentrations consistent with the established DQOs set forth in the QAPP. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by the Site. Respondent shall use this information to help to determine aspects of the appropriate Remedial Action Alternatives to be evaluated for the Site.

3.1.6 Drinking Water Well Monitoring

Respondent shall obtain samples from drinking water wells that are within an approximate one mile radius of the former plant at the Site that are at risk of being affected by contaminants associated with the Site. The constituents sampled, frequency of sampling, area and wells sampled shall initially be consistent with the current quarterly monitoring program thus far conducted by EPA. This sampling requirement may be expanded or contracted, as agreed to by EPA, depending upon the results of such well testing, installation of an Interim Response Measure, data produced in the RI and such other data or information as relevant to determine the necessity and efficacy of the water well sampling and analysis and performance monitoring, as outlined below.

Upon request by EPA, Respondent shall provide split samples to EPA or its designee. Respondent shall have the samples analyzed with a turnaround time of no greater than twenty one (21) days. If concentrations are detected that exceed maximum contaminant levels (MCL) established by the regulations under the Safe Drinking Water Act or exceed Removal Action Levels for contaminants that do not have a corresponding MCL, Respondent shall submit sample results to EPA within twenty four (24) hours of receipt and immediately provide the home(s) serviced by the affected well with bottled water and the Interim Remedial Measure, to the extent not previously offered and accepted or rejected by the homeowner.

The frequency, location of and constituents to be sampled will be reviewed on a quarterly basis by Respondent and EPA. The March 2012 sampling event will be conducted by EPA for the locations it has sampled in the preceding twelve sampling events. Beginning in June 2012, and quarterly thereafter, Respondent shall conduct drinking water well sampling until an IRM is installed, at which time,

sampling obligations will be decreased in accordance with the first paragraph of section 3.1.6.

3.1.7 Vapor Intrusion Assessment

The Respondent shall conduct a Vapor Intrusion (VI) Assessment. Because the full extent of contamination has not yet been defined, EPA anticipates that the assessment may include a phased approach as more information comes to light. The initial VI Assessment shall evaluate vapor intrusion at homes that are immediately contiguous to Respondent's former plant property at the Site and the currently known contaminated ground water plume. As more information about the contaminated plume is identified, the VI Assessment shall be expanded, as necessary, to evaluate additional areas. The Respondent shall conduct the assessment using relevant guidance regarding VI Assessments. The Respondent shall prepare report(s) submitting the findings of the VI Assessment(s) in accordance with the EPA approved Work Plan.

3.2 Data Analysis

3.2.1 Evaluate the Site Characteristics

Respondent shall analyze and evaluate the data to describe: (1) physical and biological characteristics of the Site; (2) contaminant characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. The information on physical and biological characteristics, contaminant characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. The evaluation shall include the actual and potential magnitude of releases from the sources and lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use.

Respondent shall collect any data identified by EPA as necessary to fill data gaps that EPA determines are present during preparation of the Baseline Risk Assessment (see *Guidance for Data Usability in Risk Assessment, Final*⁴, U.S. EPA, Office of Emergency and Remedial Response, April 1992, OSWER Directive No. 9285.7-09A). Also, this evaluation shall provide any information relevant to characteristics necessary for the development and evaluation of Remedial Action Alternatives and the refinement and identification of ARARs for the Site. Analyses of data collected for the Site Characterization shall meet the DQOs developed in the QAPP.

⁴ This document can be found on the Internet at: <http://www.epa.gov/oswer/riskassessment/datause/parta.htm>

3.3 Data Management Procedures

Respondent shall consistently document the quality and validity of field and laboratory data compiled during the RI. At a minimum, this documentation shall include the following activities:

3.3.1 Documenting Field Activities

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by Respondent in well maintained field logs and laboratory reports. The methods of documentation must be specified in the Work Plans and/or the SAP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. Supporting documentation described as the "CLP Data Package" must be provided with the sample analysis for all samples split or duplicated with EPA.

3.3.2 Maintaining Sample Management and Tracking

Respondent shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the BRA and Remedial Action Alternatives. Analytical results developed under the Work Plans shall not be included in any characterization reports for the Site unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, Respondent shall establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation. Respondent shall also establish a data security system to safeguard personal privacy information regarding samples collected on properties owned by others.

3.4 Site Characterization Deliverables

Respondent shall prepare the Preliminary Site Characterization Summary and the Remedial Investigation Report. In addition to reports, all data shall also be submitted electronically.

3.4.1 Electronic Data Deliverables

Respondent shall submit all sampling data as an Electronic Data Deliverable (EDD). Information about EDD can be found at:
<http://www.epa.gov/region4/superfund/allresource/edd/edd.html>.

3.4.2 Drinking Water Well Reports

Within three (3) days of receipt of analytical results from a drinking water well sampling event, the Respondent shall submit a copy of the results to EPA along

with a summary that identifies any sample results that exceed maximum contaminant levels as set forth in the Safe Drinking Water Act's regulations or exceed Removal Action Levels for contaminants that do not have a corresponding MCL.

Within thirty (30) days of receipt of analytical results from the drinking water well sampling event, Respondent shall submit a Drinking Water Well Monitoring Report.

3.4.3 Draft Letters to Property Owners and Tenants

Within fourteen (14) days of receipt of analytical results from a drinking water sampling event, the Respondent shall submit to EPA draft letters, for EPA signature, to property owners and tenants transmitting the results. Respondent shall prepare the letters in accordance with *Communicating Environmental Data to Property Owners and Tenants. Standard Operating Procedure, October 2010, EPA Region 4 Superfund, Interim Final* or its successor. The letters shall include enclosures of a tabulated historical summary for the property, and if requested by EPA, a copy of the analytical data sheets from the laboratory for the property.

3.4.4 Preliminary Site Characterization Summary

After completing field sampling and analysis, Respondent shall prepare a concise Site Characterization Summary. This summary shall review the investigative activities that have taken place and describe and display data for the Site documenting the location and characteristics of surface and subsurface features and contamination at the Site including the affected medium, location, types, physical state, and quantity and concentrations of contaminants. In addition, the location, dimensions, physical condition, and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media shall be documented. The Site Characterization Summary shall provide EPA with a reference for the identification of any supplemental data requirements, identification of remediation goals, initial development and screening of Remedial Action Alternatives, and the refinement and identification of ARARs.

3.4.5 Remedial Investigation Report

Within sixty (60) days after EPA's approval of the Risk Assessment (Task 5), Respondent shall submit to EPA for review and approval pursuant to Section X of the Settlement Agreement (EPA Approval of Plans and Other Submissions), a Draft Remedial Investigation Report consistent with the SOW and Work Plans. The Draft RI Report shall also contain a summary of the Risk Assessments. This report shall summarize results of field activities to characterize the Site, nature and extent of contamination, and the fate and transport of contaminants. Respondent shall refer to the RI/FS Guidance for an outline of the report format and contents.

Within thirty days of receipt of EPA comments, Respondent shall submit a Final RI Report which satisfactorily addresses EPA's comments.

3.5 Reuse Assessment

Respondent will perform a Reuse Assessment in accordance with EPA guidance, including Reuse Assessments: *A Tool To Implement The Superfund Land Use Directive*⁵, OSWER Directive 9355.7-06P, June 4, 2001, or subsequently issued guidance. The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for the Site.

4.0 TASK 4 – TREATABILITY STUDIES

If EPA determines that treatability testing is required, within thirty (30) days thereafter, Respondent shall submit a Treatability Testing Statement of Work ("TTSOW") to assist in the detailed analysis of alternatives. If applicable, study results and operating conditions will later be used in the detailed design of the selected remedial technology. The following activities shall be performed by Respondent if Treatability Studies are determined to be necessary.

4.1 Determination of Candidate Technologies and the need for Treatability Studies

Respondent shall submit within thirty (30) days of EPA approval of the Remedial Investigation Report, unless otherwise specified by EPA, a technical memorandum identifying candidate technologies for a Treatability Studies program during project planning (Task 1). The listing of candidate technologies shall cover the range of technologies required for alternatives analysis (Task 6.1). The specific data requirements for the Treatability Studies program shall be determined and refined during the Site Characterization and the development and screening of Remedial Action Alternatives (Tasks 3 and 6, respectively).

4.1.1 Conduct Literature Survey and Determine the need for Treatability Studies

Respondent shall conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. If practical candidate technologies have not been sufficiently demonstrated, or cannot be adequately evaluated for the Site on the basis of available information, Treatability Studies shall be conducted. EPA shall determine whether Treatability Studies will be required.

4.1.2 Evaluate Treatability Studies

Where EPA has determined that Treatability Studies are required, Respondent and EPA shall decide on the type of Treatability Studies to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment

⁵ This document can be found on the Internet at:
<http://www.epa.gov/superfund/community/relocation/reusefinal.pdf>

as well as to perform testing for various operating conditions, the decision to perform pilot testing shall be made as early in the process as possible to minimize potential delays of the FS. To assure that a Treatability Study program is completed on time, and with accurate results, Respondent shall either submit a separate Treatability Study Work Plan or an amendment to the original RI/FS Work Plan for EPA review and approval.

4.2 Treatability Study Deliverables

In addition to the memorandum identifying candidate technologies, the deliverables that are required when Treatability Studies are to be conducted include a Treatability Study Work Plan, a Treatability Study Sampling and Analysis Plan, and a Final Treatability Study Evaluation Report. EPA may also require a Treatability Study HASP, where appropriate.

4.2.1 Treatability Study Work Plan

Within thirty (30) days after submission of the TTSSOW, Respondent shall submit a Treatability Study Work Plan, including a schedule. Respondent shall prepare a Treatability Study Work Plan or amendment to the RI/FS Work Plan for EPA review and approval. This Plan shall describe the background of the Site, remedial technologies to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The DQOs for Treatability Studies shall be documented as well. If pilot-scale Treatability Studies are to be performed, the Treatability Study Work Plan shall describe installation and start-up, operation and maintenance procedures, and operating conditions to be tested. If testing is to be performed off-site, permitting requirements must be addressed.

4.2.2 Treatability Study Sampling and Analysis Plan

If the original QAPP or FSAP is not adequate for defining the activities to be performed during the Treatability Studies, a separate Treatability Study SAP or amendment to the RI SAP shall be prepared by Respondent within thirty (30) days after the inadequacy is identified. This SAP shall be submitted to EPA for review and approval. It shall be designed to monitor pilot performance. Task 1.3.6 of this SOW provides additional information on the requirements of the SAP.

4.2.3 Treatability Study Health and Safety Plan

If the original HASP is not adequate for defining the activities to be performed during the Treatability Studies, a separate or amended HASP shall be developed by Respondent within thirty (30) days after the need is recognized. Task 1.3.2 of this SOW provides additional information on the requirements of the Health and Safety Plan. EPA reviews, but does not "approve", the Treatability Study Health and Safety Plan.

4.2.4 Treatability Study Evaluation Report

Following completion of Treatability Studies, Respondent shall analyze and interpret the testing results in a technical report to EPA. Depending on the sequence of activities, this report may be a part of the RI/FS Report or a separate deliverable. The report shall evaluate each technology's effectiveness, implementability, cost, and actual results as compared with predicted results. The report shall also evaluate full-scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

5.0 TASK 5 - BASELINE RISK ASSESSMENT

Respondent will perform the Baseline Human Health Risk Assessment and Ecological Risk Assessment (Risk Assessments), utilizing existing data obtained by EPA where relevant, in accordance with the SOW, Work Plans, and applicable EPA guidance, including but not limited to: "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part A)," (RAGS, EPA-540-1-89-002, OSWER Directive 9285.7-01A, December 1989); "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments)," (RAGS, EPA 540-R-97-033, OSWER Directive 9285.7-01D, January 1998); "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments" (ERAGS, EPA-540-R-97-006, OSWER Directive 9285.7-25, June 1997) or subsequently issued guidance.

Section 300.430(d)(4) of the National Contingency Plan states that a site-specific Baseline Risk Assessment (BRA) be conducted as part of the RI. The BRA is an analysis of the potential adverse health effects (current and future) caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these releases (i.e., an assumption of no action). This analysis includes identifying and characterizing the toxicity and effects of hazardous substances present, describing contaminant fate and transport, evaluating the potential for human exposure, and assessing the risk of potential impacts or threats on human health. An additional component of the BRA is the Environmental Assessment which assesses the risk of potential impacts or threats to the ecological environment (including both flora and fauna). The BRA provides the basis for determining whether or not remedial action is necessary at a site and a justification for performing any remedial action that may be required. Respondent shall conduct the BRA and identify Remedial Goal Options developed from the risk assessments.

5.1 Risk Assessment Methodology

For the BRA, Respondent shall prepare a Human Health Risk Assessment Report, an Ecological Risk Assessment Report, and a Remedial Goal Options Technical Memorandum following the formats prescribed in current EPA risk assessment guidance. Risk assessment methodologies are constantly evolving. The following website is a resource of information regarding conducting risk assessments:
<http://www.epa.gov/osweririskassessment/risksuperfund.htm>

5.2 Risk Assessment Deliverables

Respondent shall prepare the following deliverables for the Baseline Risk Assessment within the timeframes specified in the EPA approved RI/FS Work Plan.

5.2.1 Human Health Risk Assessment

Respondent shall prepare a Human Health Risk Assessment Report in accordance with current EPA guidance. Guidance documents can be found through links at the website identified under Task 5.1 of this SOW.

5.2.2 Ecological Risk Assessment

The Ecological Risk Assessment (ERA) shall be performed for the Site in accordance with *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments -Interim Final*⁶, EPA-540-R-97-006, OSWER 9285.7-25, PB97-963211, June 1997. Additional guidance can be found through links at the website identified under Task 5.1 of this SOW. The ERA includes an eight step process. All eight steps may not be required for every Site. At each Scientific Management Decision Point, EPA will decide whether or not it is necessary for Respondent to proceed to the following step.

5.2.3 Remedial Goal Options

Respondent shall prepare a Technical Memorandum which outlines the Remedial Goal Options (RGOs) for the chemicals of concern and media of concern that are protective of human health, the ecology and ground water. This document should include both ARARs and health-based cleanup goals. This document should include a table with media cleanup levels for each chemical that contributes to a pathway that exceeds a 10^{-6} risk or a Hazard Index (HI) of 0.1, or exceeds a state or federal chemical-specific ARAR for each scenario evaluated in the BRA. Chemicals need not be included if their individual carcinogenic risk contribution to a pathway is less than 10^{-6} , or their noncarcinogenic Hazard Quotient (HQ) is less than 0.1. The table should include the 10^{-4} , 10^{-5} , and 10^{-6} risk levels for each chemical, media and scenario (land use) and the HQ 0.1, 1 and 10 levels, as well as any chemical-specific ARAR values. The values should be developed by combining the exposure levels to each chemical by a receptor from all appropriate routes of exposure (i.e., inhalation, ingestion and dermal) within a pathway and rearranging the site-specific average-dose equations used in the BRA to solve for the concentration term. The resulting table should present one set of RGOs for each land use (e.g., residential (child and adult) and industrial).

The purpose is to provide the RPM with the maximum risk-related concentration level options on which to develop remediation aspects of the Feasibility Study and Proposed Plan. These Site-specific RGOs replace the generic Preliminary

⁶ This document can be found at: <http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>

Remediation Goals (PRGs) in providing the final risk-based guidance for remedial action. The results of the Ecological Risk Assessment should be the identification of remediation goals for the ecological contaminants of concern that would be protective for the receptors. These RGOs should be presented for the relevant environmental media.

6.0 TASK 6 – DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES

The development and screening of Remedial Action Alternatives is performed to select an appropriate range of waste management options to be evaluated. This range of options shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of the waste, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative. Institutional Controls shall also be evaluated as a remedy component. The following activities shall be performed by Respondent as a function of the development and screening of Remedial Action Alternatives for the Site.

6.1 Development and Screening of Remedial Action Alternatives

Respondent shall begin to develop and evaluate, concurrent with the RI Characterization task, a range of appropriate remedial action alternatives that, at a minimum, ensure protection of human health and the environment and comply with all ARARs.

6.1.1 Refine and Document Remedial Action Alternatives

Respondent shall review and, if necessary, propose refinement to the Site Objectives and preliminary remedial action objectives that were established during the Scoping phase (Task 1). Any revised Site Objectives or revised remedial action objectives shall be documented in a technical memorandum as discussed in Task 1.2. These objectives shall specify the contaminants, exposure pathways and receptors, an acceptable contaminant level or range of levels for each exposure route, and options for Engineering Controls and Institutional Controls.

6.1.2 Develop General Response Actions

Respondent shall develop general response actions for the Site defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the remedial action objectives.

6.1.3 Identify Areas and Volumes of Media

Respondent shall identify areas and volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The chemical and physical characterization of the Site and the Baseline Risk Assessment and remediation goals shall also be taken into account.

6.1.4 Identify, Screen, and Document Remedial Technologies

Respondent shall identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at the Site. General response actions shall be refined to specify remedial technology types. Technology process options for each of the technology types shall be identified either concurrent with the identification of technology types or following the screening of the considered technology types. Process options shall be evaluated on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The technology types and process options shall be summarized for inclusion in a technical memorandum. The reasons for eliminating alternatives must be specified.

6.1.5 Assemble and Document Alternatives

Respondent shall assemble selected representative technologies into alternatives for the Site. Together, all of the alternatives shall represent a range of options that shall address the Site. A summary of the assembled alternatives and their related action-specific ARARs shall be prepared by Respondent for inclusion in a technical memorandum. The reasons for eliminating alternatives during the preliminary screening process must be specified.

6.1.6 Refine Alternatives

Respondent shall refine the Remedial Action Alternatives to identify contaminant volumes to be addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information shall be collected for an adequate comparison of alternatives. Remedial action objectives shall also be refined as necessary to incorporate any new risk assessment information presented in Baseline Risk Assessment reports. Additionally, action-specific ARARs shall be updated as the Remedial Action Alternatives are refined.

6.1.7 Conduct and Document Screening Evaluation of Each Alternative

Respondent shall perform a final screening process based on short and long term aspects of effectiveness, implementability, and relative cost. Note that the evaluation of effectiveness involves evaluating the long-term and short-term risks, among other factors, associated with a remedial alternative. The screening of alternatives shall be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis.

The screening shall preserve the range of alternatives that was initially developed. The range of remaining alternatives shall include options that use treatment technologies and permanent solutions to the maximum extent practicable. Respondent shall prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening,

and identifying the action-specific ARARs for the alternatives that remain after screening.

6.2 Alternatives Development and Screening Deliverables

Respondent shall develop an appropriate range of options to address Site contamination including the threat of contamination from the Site in ground water wells or springs which are relied upon by properties and/or persons for their drinking water source, surface water, sediment, air and the vapor intrusion pathway, soils not fully remediated during the removal action, as well as remediation of ground water in the contaminated ground water plume.

Respondent shall prepare technical memoranda summarizing the work performed and the results of each task in section 6.1, including an alternatives array summary. This alternatives array shall be modified by Respondent when conducting Task 7 if required by EPA's comments to assure identification of a complete and appropriate range of viable alternatives to be considered in the detailed analysis. These deliverables shall document the methods, rationale, and results of the alternatives screening process.

The Site will be evaluated through the development and screening of alternatives, as provided in the RI/FS Work Plan. In accordance with the schedules or deadlines established in the Settlement Agreement, the SOW, and/or the EPA-approved RI/FS Work Plan, Respondent shall provide EPA with the following deliverables for review and approval pursuant to Section X of the Settlement Agreement (EPA Approval of Plans and Other Submissions):

6.2.1 Memorandum on Remedial Action Objectives

Within the timeframe specified in the EPA approved RI/FS Work Plan, Respondent shall submit a Memorandum on Remedial Action Objectives which shall include remedial action objectives for Engineering Controls as well as for Institutional Controls, where relevant.

6.2.2 Memorandum on Development and Screening of Alternatives

Within the timeframe specified in the EPA approved RI/FS Work Plan, Respondent shall submit a Memorandum on Development and Screening of Alternatives which shall summarize the development and screening of remedial alternatives.

7.0 TASK 7 – DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES

The detailed analysis shall be conducted by Respondent to provide EPA with the information needed to allow for the selection of a remedy for the Site.

7.1 Detailed Analysis of Alternatives

Respondent shall conduct a detailed analysis of remaining alternatives. This analysis shall consist of an assessment of each option against a set of nine evaluation criteria and a

comparative review of all options using the same nine evaluation criteria as a basis for comparison. Respondent's analysis shall also include an assessment of the specific types of Institutional Controls being considered, including an evaluation of each option against the nine evaluation criteria.

7.1.1 Apply Nine Criteria and Document Analysis

Respondent shall apply nine evaluation criteria to the assembled Remedial Action Alternatives to ensure that the selected Remedial Action Alternative will be protective of human health and the environment; will be in compliance with, or include a waiver of, ARARs; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance. For each alternative, Respondent shall provide: (1) a description of the alternative that also includes the key ARARs associated; and (2) a discussion of the individual criterion assessment.

Criteria 8 and 9 are considered after the RI/FS Report has been released to the general public. Since Respondent does not have direct input on criteria (8) State acceptance and (9) community acceptance, these two criteria will be addressed by EPA after completion of the Draft FS Report.

7.1.2 Compare Alternatives Against Each Other and Document the Comparison of Alternatives

Respondent shall perform a comparative analysis among the Remedial Action Alternatives. That is, each alternative shall be compared against the others using the nine evaluation criteria as a basis of comparison. No alternative shall be identified by Respondent as the preferred alternative in the Feasibility Study. Identification and selection of the preferred alternative is conducted by EPA.

7.2 Detailed Analysis Deliverables

Respondent shall conduct a detailed analysis of remedial alternatives, as described in the SOW and RI/FS Work Plan. In accordance with the deadlines or schedules established in this Settlement Agreement, the SOW, and/or the EPA-approved RI/FS Work Plan, Respondent shall provide EPA with the following deliverables and presentation for review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions):

7.2.1 Report on Comparative Analysis and Presentation to EPA

Within the timeframe specified in the EPA approved RI/FS Work Plan, Respondent will submit a report on comparative analysis to EPA. Within thirty (30) days of submitting the report on comparative analysis, Respondent will present to EPA a

summary of the findings of the remedial investigation and remedial action objectives, and present the results of the nine criteria evaluation and comparative analysis, as described in the SOW.

7.2.2 Alternatives Analysis for Institutional Controls and Screening

Within the timeframe specified in the EPA approved RI/FS Work Plan, Respondent shall submit a memorandum on the Institutional Controls identified in the Memorandum on Development and Screening of Alternatives as potential remedial actions. The Alternatives Analysis for Institutional Controls and Screening shall: (i) state the objectives (i.e., what will be accomplished) for the Institutional Controls; (ii) determine the specific types of Institutional Controls that can be used to meet the remedial action objectives; (iii) investigate when the Institutional Controls need to be implemented and/or secured and how long they must be in place; (iv) research, discuss, and document any agreement with the proper entities (e.g., state, local government entities, local landowners, conservation organizations, Respondent) on exactly who will be responsible for securing, maintaining, and enforcing the Institutional Controls. The Alternatives Analysis for Institutional Controls and Screening shall also evaluate the Institutional Controls identified in the Memorandum on Development and Screening of Alternatives against the nine evaluation criteria outlined in the NCP (40 C.F.R. § 300.430(e)(9)(iii)) for CERCLA cleanups, including but not limited to, costs to implement, monitor, and/or enforce the Institutional Controls. The Alternatives Analysis for Institutional Controls and Screening shall be submitted as an appendix to the Draft Feasibility Study Report.

7.2.3 Institutional Controls Implementation and Assurance Plan (ICIAP)

Within the timeframe specified in the approved RI/FS Work Plan, Respondent shall prepare an Institutional Controls Implementation and Assurance Plan (ICIAP). The ICIAP shall be prepared in accordance with EPA guidance regarding Institutional Controls, including, but not limited to *Institutional Controls: A Guide to Planning, Implementing, Maintaining and Enforcing Institutional Controls at Contaminated Sites*.⁷

7.2.4 Draft Feasibility Study Report

Within thirty (30) days after the presentation to EPA described in Task 7.2.1, Respondent shall submit to EPA a Draft Feasibility Study Report which reflects the findings in the Risk Assessments. Respondent shall refer to Table 6-5 of the RI/FS Guidance for report content and format. The report as amended, and the administrative record, shall provide the basis for the proposed plan under CERCLA Sections 113(k) and 117(a) by EPA, and shall document the development and analysis of remedial alternatives.

⁷ This guidance can be found at: <http://www.epa.gov/superfund/policy/ic/pdfs/PIME-IC-Guidance-Interim.pdf>

7.2.5 Final Feasibility Study Report

Within thirty (30) days of receipt of EPA comments on the Draft Feasibility Study Report, Respondent shall submit a Final FS Report which satisfactorily addresses EPA's comments. Once EPA's comments have been addressed by Respondent to EPA's satisfaction and EPA approval has been obtained or an amendment has been furnished by EPA, the Final FS Report may be bound with the Final RI Report.